

IN THE CLAIMS:

Please amend claims 1-13 and add new claims 14-16 as follows:

1. (currently amended) Device for rescue and safety for swimming ~~[[.]]~~
 pools or ~~leisure parks, characterised by the fact that it consists of~~ recreational water
parks, comprising:

~~[[.]]~~ a wristband (1) ~~consisting of~~ including:

- 5 a cardiac-arrest detector (65),
- a printed circuit (7),
- a transmitter (8),
- a ~~micro-controller~~ microcontroller (9),
- a transponder (10),
- 10 at least one battery (13),
- a personal identification code (2),
- a means of display (3),
- a panic button (4), and
- a contact button (75) ~~consisting of~~ including:

- 15 a push button in contact with ~~the~~ a wrist of the user and
- which, when pushed when the wristband is in a closed configuration about the wrist,
- activates a pulse detector (88), and when ~~this~~ the pulse detector is activated, a light
- ~~comes on (14) and there are (14) is activated;~~

means of managing the cardiac arrest detector and the panic button

20 ~~[[.]]~~ ;

~~[[.]]~~ ~~the~~ means to trigger an automatic rescue device ~~[[.]]~~ ; and

~~[[.]]~~ a location device (27) with at least one central receiver ~~capable of~~
for communicating with other at least one control centres center (31) and

transmitting a warning signal to an emergency centre center (35).

2. (currently amended) Device ~~as per~~ according to claim 1, ~~characterised by the fact that~~ wherein the wristband contains a water detector (39) that includes ~~the~~ means for activating/deactivating ~~[[it]]~~ the automatic rescue device.

3. (currently amended) Device according to ~~one of claims 1 and 2~~, ~~characterised by the fact that~~ claim 1, wherein the automatic rescue device is an inflatable grid (26) ~~consisting of~~ including means ~~of uplifting for raising the grid~~, means for checking ~~the~~ a degree of vacuum in the grid to maintain the grid in a deflated state, and ~~[[of]]~~ means for the inflation/deflation of the grid.

4. (currently amended) Device according to ~~one of claims 1 to 3~~, ~~characterised by the fact that~~ claim 1, wherein the means for managing the panic button (4) and the cardiac-arrest detector (65), ~~consist of~~ includes:

5 ~~[[.]]~~ a pulse detector (88) with two light sources (5, 96) in the form of electroluminescent diodes, one of the light sources (5) being located on the wrist (99) of the user and passing through human tissue ~~(5)~~ of the user, and the other light source (96) being located beneath the wrist, these light sources (5, 96) being included in the wristband, ~~the beam with light~~ emitted by one of the light sources (96) being ~~reflected~~ incident on a light sensor (6) ~~[[.]]~~ .

10 ~~[[.]]~~—the means for generating an alarm code (89) ~~corresponding in~~ response to pressing of the panic button (4),

~~[[.]]~~ the cardiac-arrest detector (65) ~~being capable of Y/N~~ for

performing a YES/NO determination of whether a pulse is present (93) and ~~[[of]]~~ for reading pulses in ~~loops~~ a software processing loop (88), and

15

~~[[.]]~~ a fault meter, operating ~~in loops~~ with the software processing loop (88), with a re-setting procedure (91), and with a maximum fault tolerance threshold, for performing a count of the pulses, capable of transmitting alarm codes (95) on a FM radio signal, either when the fault meter pulse count has exceeded ~~the~~ permitted a predetermined limit or when the panic button (4) is activated.

5. (currently amended) Device ~~as per~~ according to claim 4, ~~characterised by the fact that~~ wherein the pulse detector (88) consists of a 2 x 2 array of diodes (5, 96), located on either side of a half-wrist band above/below the wrist, with two light detectors (6) on either side of the wrist.

6. (currently amended) Device ~~as per one of the claims 4 or 5,~~ ~~characterised by the fact that~~ according to claim 4, wherein the pulse detector (88) ~~consists of~~ includes a first diode (5), located on one side of the wrist and a reference diode (96) on the opposite side of the wrist, which is surrounded by two light sensors (6) for detecting the ~~beam~~ light from each of the diodes.

7. (currently amended) Device ~~as per one of the claims 1 to 3,~~ ~~characterised by the fact that~~ according to claim 1, wherein the wristband (1) includes ~~an~~ the personal identification code (2) recorded in the transponder (10), which, ~~thanks to~~ in conjunction with a transponder detector (18), is capable of opening and closing doors and lockers, ~~lockers~~ and triggering an alarm (24) ~~[[.]]~~

~~The lockers are~~ with the opening and closing of lockers being managed overall or in
rows via the microcontroller (9).

8. (currently amended) Device ~~as per claim 2, characterised by the fact~~
~~that according to claim 2, wherein~~ the water detector (39) ~~consists of either~~ includes
at least one of:

a duct (41) with at least two apertures through which water can enter
(42), ~~such~~ the duct (41) containing electrodes (40) connected to a water detection
circuit ~~capable of engaging a~~ for actuating the rescue device or an alarm; ~~[[or]]~~ and
two contacts ~~sufficiently distant~~ spaced apart from each other and not
in contact with the skin ~~[[;]]~~ of the user with protective coverings rendering them
watertight during bathing.

9. (currently amended) Device ~~as per one of claims 1 to 8 characterised~~
~~by the fact that~~ according to claim 1, wherein the wristband (1) ~~consists of~~ includes:

a ~~box~~ housing,

~~[[a]]~~ the panic button (4), and

~~[[a]]~~ the contact button (75) which ~~is a~~ includes the push button in
contact with the wrist, each of which is located inside the ~~box~~ housing and covered
by a watertight membrane (47).

10. (currently amended) Device ~~as per one of claims 1 to 9, characterised~~
~~by the fact that~~ according to claim 1, wherein the location detector device (27)
~~consists of~~ includes field detectors (49) with antennae (32) passing through a

multiplexer (67), a level adapter (68) and the microcontroller (9).

11. (currently amended) Device ~~as per claim 3, characterised by the fact~~
~~that~~ according to claim 3, wherein the inflation of the grid (26) is managed by an
inflation system, including a compressed air/gas (29) pipe, an emergency electro-
valve (55), a non-emergency electro-valve (56), an electro-valve for discharging (57)
5 and a pressure relief valve (58) for emergencies should the necessary inflation
pressure not be the same as that required for powering the discharge, a pressure
relief valve (59) for non-emergencies, a cut-out switch (60), a venturi tube (62) and
a vacuum switch (63) for controlling the vacuum, ~~[[.]]~~ wherein the entire
inflation system is managed by the microcontroller (9) to which ~~the following are~~ is
10 functionally connected a component device selected from the group consisting of:
the cardiac-arrest detector (65), the panic button (4), the contact button (75) ~~which is~~
a with the push button in contact with the user's wrist, a non-emergency reset button
(69), a vacuum switch (63), a descent button (70), a lifeguard button (71), an alarm
(24), a monitor (66), a control keyboard (72), a display panel for the control ~~centre~~
15 center (73), and a computer (74), and combinations thereof.

12. (currently amended) Device ~~as per claim 3, characterised by the fact~~
~~that~~ according to claim 3, wherein the grid (26) ~~consists of~~ includes flanges and is
~~uplifted~~ raised either by straps (51) and strap guides (53) fixed under the flanges or
by extendable bars (97) which are housed ~~within~~ in the strap guides (53), ~~such the~~
supporting bars, once extended, resting on the edge of ~~the~~ a swimming pool, ~~and~~
~~thus raising~~ the grid (26) raised in order to enable a robotic arm of a robot to slide

over the surface of the water [[,]] ~~if the robot has an arm.~~

13. (currently amended) Device ~~as per one of claims 1 to 12,~~
~~characterised by the fact that~~ according to claim 1, wherein the location detector
device (27) is connected to [[a]] at least one solar battery or batteries.

14. (new) A wristband for attachment to the wrist of a person using a
swimming pool or other prescribed bodies of water, the wristband comprising:

- a cardiac-arrest detector (65),
- a printed circuit (7),
- 5 a transmitter (8),
- a microcontroller (9),
- a transponder (10),
- at least one battery (13),
- a personal identification code (2),
- 10 a means of display (3),
- a panic button (4), and
- a contact button (75) including:

a push button in contact with a wrist of the user and
which, when pushed when the wristband is in a closed configuration about the wrist,
15 activates a pulse detector (88), and when the pulse detector is activated, a light (14)
is activated.

15. (new) A warning and rescue system for personnel in a contained

aquatic environment, the system comprising:

a. an automatic rescue apparatus submerged at a predetermined depth in the contained aquatic environment;

5 b. an actuator means associated with the automatic rescue apparatus that activates the automatic rescue apparatus in response to a distress signal;

c. a personal detection and signaling apparatus for attachment to personnel in the aquatic environment that includes:

10 (i) signal generating means for periodically transmitting a unique personal identification code,

 (ii) a cardiac arrest detector having a pulse sensor and sensor mounting means,

 (iii) a processor/controller,

15 (iv) a transponder,

 (v) a power source, and

 (vi) a panic button operatively connected to a signal transmitter; and

d. a personnel location monitor with at least one central receiver
20 for communicating with at least one safety control center.

16. (new) The warning and rescue system of claim 15, wherein the personal detection and signaling apparatus includes:

(vii) a wristband including:

the cardiac-arrest detector,

5

a printed circuit,
a transmitter including the signal generating means,
a microcontroller including the processor/controller,
the transponder,

at least one battery included in the power source,

10

a personal identification code,
a display,
the panic button,
a contact button including:

a push button in contact with a wrist of a user

15

and which, when pushed when the wristband is in a closed configuration about the
wrist, activates the pulse sensor, and when the pulse sensor is activated, a light is
activated, and

means for managing the cardiac arrest detector and the
panic button.